Cotton breeding in the Brazilian Cerrado

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ABSTRACT

Brazilian Cerrado has 2,064,676 km², representing 24.42% of the Brazilian territory and including part of the following states: Mato Grosso do Sul, Mato Grosso, Goiás, Tocantins, Bahia, Piauí, Maranhão, Minas Gerais, Rondônia and Federal District. Of these 206 million hectares, 127 million hectares are available to agriculture and only 47 million are currently in use. During the 2001/2002 harvest, the Brazilian Cerrado produced 83.4% of the total Brazilian cotton lint harvest. The tillage system is completely mechanized, including ginning on farms. 98.5% of the 524,000 ha area that is under cotton cultivation have been developed under rain conditions. A breeding program for the Cerrado was established in 1989. It started in Mato Grosso State and expanded to Goiás and Bahia States. Subsequently several new varieties were developed. Embrapa developed eleven cotton varieties for Brazilian Cerrado conditions, viz., CNPA ITA 90, CNPA ITA 92, BRS ITA 96, CNPA ITA 97, BRS ANTARES, BRS FACUAL, BRS AROEIRA, BRS IPÊ, BRS SUCUPIRA, BRS ITAÚBA and BRS CEDRO. Currently, induced by the increasing Cerrado cotton yield, other companies owning cotton varieties in the Brazilian market like IAC, IAPAR and COODETEC, as well as transnational companies (AVENTIS/BAYER, SYNGENTA, MDM/Deltapine, STONEVILLE) started to select germplasm to use in breeding programs to Brazilian Cerrado. To obtain better results and lower production costs, all varieties must be tillaged, changing culture exploitation. The rotation of soybean, corn and cotton within three cycles by year makes it possible to avoid diseases and pests, besides the higher yield and lower costs due to this land use system.
the Brazilian Cerrado. The producers have been demanding transgenics cotton varieties to use in a strategy to reduce input costs. Nevertheless, there are strong efforts by syndicates and environmental interest groups to postpone the release and cultivation of such varieties.

**Conclusions**

The Brazilian Cerrado is the main expansion area of Brazilian agribusiness and has an expansion potential of 30 million hectares; the Cerrado region produces 83.4% of the Brazilian cotton, with excellent fiber quality and competitive production costs with traditional export market; Embrapa Cotton, in partnership with a foundation of support to research and using private funds, has a breeding program that developed eleven cotton varieties adapted to the Cerrado region.

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**References**